

CLAIMS

1. Optical device reflecting a range of wavelengths comprised between 10nm and 20nm and comprising alternate superposed first and second layers, said first layers being made of metal or metallic compound and said second layers comprising amorphous silicon, optical device wherein the second layers are formed by an amorphous silicon compound chosen from a-Si-H_x, a-Si-CH_x, a-Si-C_x, a-Si-OH_x, a-Si-F_x, a-Si-FH_x, a-Si-N_x, a-Si-NH_x, x being comprised between 0.01 and 0.3.
2. Optical device according to claim 1, wherein each first layer is formed by an intermediate metal layer arranged between two peripheral layers.
3. Optical device according to claim 2, wherein the two peripheral layers are made of carbide of said metal, nitride of said metal, boron carbide or carbon.
4. Optical device according to claim 1, wherein the metal is molybdenum.
5. Optical device according to claim 1, wherein the metallic compound is a molybdenum carbide.
6. Lithography mask comprising an optical device according to any one of the claims 1 to 5.
7. Lithography mask according to claim 6, wherein the thickness of the assembly formed by superposed first and second layers is 6.9nm.
8. Lithography mask according to claim 6, wherein the number of first layers is comprised between 40 and 60.